

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of )  
 )  
Modernizing the E-rate Program for Schools ) WC Docket No. 13-184  
and Libraries )

**COMMENTS OF AMPLIFY EDUCATION, INC.**

Regina M. Keeney  
Gil M. Strobel  
LAWLER, METZGER, KEENEY & LOGAN, LLC  
2001 K Street NW, Suite 802  
Washington, DC 20006  
202-777-7700  
gstrobel@lawlermetzger.com

*Attorneys for Amplify Education, Inc.*

David Stevenson  
Vice President, Government Relations  
AMPLIFY EDUCATION, INC.  
500 New Jersey Ave NW, Floor 6  
Washington, DC 20001  
202-509-9516

Antoinette Cook Bush  
Executive Vice President,  
Government Affairs  
NEWS CORPORATION  
300 New Jersey Ave. NW, Suite 900  
Washington, DC 20001  
202-465-8771

April 7, 2014

## TABLE OF CONTENTS

I.	INTRODUCTION AND SUMMARY.....	1
II.	DISCUSSION.....	3
	A. The Commission Should Eliminate Distinctions Between Priority 1 and Priority 2 Services and Provide Schools the Flexibility to Design Cost-Effective Solutions for Meeting Their Individual Broadband Needs.....	3
	B. E-Rate Support Should be Used to Fund Tools that Improve Network Efficiency .....	6
	C. The Commission Should Prioritize Funding Based on Schools’ Ability to Achieve Minimum Bandwidth Targets and Maximize the Value of the Support They Receive.....	7
III.	CONCLUSION .....	11

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Modernizing the E-rate Program for Schools and Libraries	)	WC Docket No. 13-184
	)	

**COMMENTS OF AMPLIFY EDUCATION, INC.**

Amplify Education, Inc. (“Amplify”) submits these comments in response to the Public Notice (“PN”) released by the Wireline Competition Bureau in the above-captioned proceeding seeking comment on selected issues related to the schools and libraries universal support mechanism (“E-rate”).<sup>1</sup>

**I. INTRODUCTION AND SUMMARY**

Amplify is a leading provider of one-to-one learning solutions that take advantage of modern technology to offer personalized, adaptive educational tools that adjust to how individual students learn. Amplify does not receive E-rate support, nor is it a provider of E-rate eligible services. Amplify’s goal in this proceeding is simply to help ensure that E-rate funds are used as efficiently as possible to maximize students’ access to the digital educational resources available to them both now and in the future.<sup>2</sup> Amplify’s extensive experience working with schools to

---

<sup>1</sup> *Wireline Competition Bureau Seeks Focused Comment on E-rate Modernization*, WC Docket No. 13-184, Public Notice, DA 14-308 (rel. Mar. 6, 2014) (“Public Notice” or “PN”).

<sup>2</sup> Amplify’s objectives are virtually identical to the goals the Federal Communications Commission (“FCC” or “Commission”) has proposed for E-rate: (1) “ensuring that schools and libraries have affordable access to 21st Century broadband that supports digital learning; (2) maximizing the cost-effectiveness of E-rate funds; and (3) streamlining the administration of the [E-rate] program.” Public Notice ¶ 1. Although Amplify supports streamlining the

develop and deploy digital learning tools has provided it with important insights into how to maximize the cost-effectiveness of E-rate expenditures and ensure that schools have access to the bandwidth they need to enjoy the full benefits of digital and online educational resources.<sup>3</sup>

In particular, Amplify urges the Commission to:

- Eliminate the distinctions between priority 1 and priority 2 services;
- Provide funding for tools that increase network efficiency; and
- Prioritize funding for schools that fall below the minimum bandwidth target,<sup>4</sup> with a preference for schools that receive complementary funding through state grants.

As Chairman Wheeler aptly stated, “[a] 21<sup>st</sup> century E-Rate program needs to focus on 21<sup>st</sup> century needs.”<sup>5</sup> Taking the actions recommended by Amplify will allow the Commission

---

administration of E-rate where appropriate, the Commission’s first two goals fit more squarely within Amplify’s area of expertise. Accordingly, Amplify’s comments are focused on those topics.

<sup>3</sup> See Public Notice ¶ 4; see also, e.g., Smarter Balanced Assessment Consortium, *The Smarter Balanced Technology Strategy Framework and Testing Device Requirements*, at 3 (Nov. 1, 2013), [http://www.smarterbalanced.org/wordpress/wp-content/uploads/2011/12/Tech\\_Framework\\_Device\\_Requirements\\_11-1-13.pdf](http://www.smarterbalanced.org/wordpress/wp-content/uploads/2011/12/Tech_Framework_Device_Requirements_11-1-13.pdf), (describing many of the benefits of digital learning) (“Smarter Balanced Report”).

<sup>4</sup> Amplify has previously recommended that the target be set no lower than 250 kbps/student. Comments of Amplify at 8. Other parties have argued for significantly higher bandwidth targets. See, e.g., Letter from Stephan L. Goodman, ADTRAN, Inc. at 2 (Feb. 4, 2014) (supporting 1 Mbps per student); Comments of Cisco Systems, Inc. at 16 (estimating that by 2014 schools will need 0.5 Mbps per student and 2 Mbps per student by 2018); Ex Parte Comments of McGraw-Hill Education at 4-5 (Nov. 22, 2014) (same) (“McGraw-Hill Education *ex parte*”); Comments of Xirus, Inc. at 3 (Sept. 13, 2013) (same). (Unless otherwise indicated, all letters, comments, and reply comments cited herein were filed in WC Docket No. 13-184. Additionally, unless otherwise indicated, all comments cited herein were filed on September 16, 2013, and all reply comments cited herein were filed on November 8, 2013.)

to re-tailor E-rate to meet the needs of today's students. As the LEAD Commission has explained, "[a] revitalized E-rate program will ensure ample broadband access . . . so that we can harness the power of technology for the next generation of American students."<sup>6</sup>

## II. DISCUSSION

### A. The Commission Should Eliminate Distinctions Between Priority 1 and Priority 2 Services and Provide Schools the Flexibility to Design Cost-Effective Solutions for Meeting Their Individual Broadband Needs

As Amplify has explained, it is critical that the Commission tailor its E-rate reforms to ensure that individual students and teachers have access to sufficient bandwidth to allow them to take advantage of the digital learning tools available now and in the future.<sup>7</sup> Unfortunately, as Chairman Wheeler has noted, a majority of schools still lack adequate broadband access.<sup>8</sup> The Commission should take immediate action to address this problem. A good first step would be to eliminate artificial distinctions between priority 1 and priority 2 services<sup>9</sup> and focus more

---

<sup>5</sup> Prepared Remarks of Tom Wheeler, FCC Chairman, Council of Chief State School Officers Legislative, at 3 (Mar. 17, 2014), [http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2014/db0317/DOC-326083A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0317/DOC-326083A1.pdf), ("Chairman Wheeler March 17<sup>th</sup> Remarks").

<sup>6</sup> Reply Comments of LEAD Commission at 2-3.

<sup>7</sup> *See, e.g.*, Comments of Amplify at 7.

<sup>8</sup> Chairman Wheeler March 17<sup>th</sup> Remarks at 2 (citing survey results showing that 72 percent of schools report broadband speeds that are inadequate for their teaching needs).

<sup>9</sup> *See* Public Notice ¶ 10; *see also* Comments of Amplify at 9-11; Comments of Minority Media and Telecommunications Council, the Rainbow PUSH Coalition, and the League United Latin American Citizens at 17 (favoring the elimination of the distinction between priority 1 and priority 2 services); Reply Comments of XO Communications at 3-4; Reply Comments of Education Coalition at 7; Reply Comments of Funds for Learning, LLC at 1; Comments of National Cable & Telecommunications Association at 14.

holistically on funding the services and equipment needed to provide the minimally acceptable level of connectivity – at least 250 kbps – to individual students throughout a school building.<sup>10</sup>

Providing students with the necessary broadband access will require a combination of (1) adequate bandwidth from the Internet service provider (“ISP”) and wide area network (“WAN”) to the school premises;<sup>11</sup> (2) local area networks (“LANs”) to distribute that bandwidth throughout the school building(s); and (3) Wi-Fi networks and wireless access points (“WAPs”) to provide the final connection to individual students and teachers in the classroom or other parts of the school.<sup>12</sup> The FCC should adjust its E-rate rules to enable schools to receive the funding they need for all three types of connections.

These adjustments include placing an emphasis on obtaining and upgrading both external and internal connections, as needed, to enable schools to meet or exceed per-student bandwidth

---

<sup>10</sup> Comments of Amplify at 3-4, 9-11; *see also* Chairman Wheeler March 17<sup>th</sup> Remarks at 4 (explaining that E-rate needs to provide “21<sup>st</sup> century connectivity into and throughout our schools”); Comments of Qualcomm Incorporated at 13 (“the agency should do away with the existing priority one/priority two classification system” so schools can choose items that best meet their local needs); Comments of Cisco Systems, Inc. at 7; Comments of State Educational Technology Directors Association (“SETDA”) at 19 (“SETDA supports the simplification and merging of Priority 1 and 2 services, allowing local school districts the freedom to design and deploy cost-effective, comprehensive solutions that meet student and teacher needs in line with adopted capacity targets.”).

<sup>11</sup> Recent data show that over 40 percent of school districts have ISP connections of less than 100 Mbps. Smarter Balanced Report at 9.

<sup>12</sup> *See* Comments of Amplify at 9; *see, also, e.g.*, Letter from Charles Eberle, Telecommunications Access Policy Division, FCC Wireline Competition Bureau, to Marlene H. Dortch, FCC Secretary, at 1 (Mar. 4, 2014) (explaining that the Los Angeles Unified School District’s (“LAUSD’s”) implementation of a district-wide 1:1 device initiative “requires that every school have high-density WiFi coverage”) (“LAUSD *ex parte*”). The LAUSD also “installs two WAPs in every classroom” in order to ensure that each student has access to the necessary bandwidth. *Id.* at 2.

targets established by the Commission. In many situations, E-rate funds will be needed both to increase the bandwidth being delivered to the school *and* for the internal connections needed to distribute that bandwidth to the students within the school buildings.<sup>13</sup> Equipment needed to “get high-capacity broadband from the building’s front door to the . . . [students’] learning devices” include internal wiring, switches, routers, WAPs and the software supporting those components.<sup>14</sup> To the extent the Commission needs to prioritize certain types of expenditures over others, it should consider emphasizing support for services and equipment that allow schools to achieve the target bandwidth over funding for paging and other legacy services that are not essential to digital learning.<sup>15</sup> Support is also needed for LAN controllers, firewalls, and

---

<sup>13</sup> Even schools with high bandwidth connections to the Internet and high-bandwidth WANs or LANs often lack the Wi-Fi access points needed to bring the bandwidth all the way to the individual student. *See, e.g.*, the Smarter Balanced Report at 2; *see also* Chairman Wheeler March 17<sup>th</sup> Remarks at 2 (noting the importance of WiFi and decrying the fact that “the E-rate program is not helping to put WiFi in all classrooms”).

<sup>14</sup> Public Notice ¶ 11; *see also* Letter from Charles Eberle, FCC Telecommunications Access Policy Division, to Marlene H. Dortch, FCC Secretary, at 1-2 (Mar. 14, 2014) (describing Summit Public School’s use of WAPs) (“Summit *ex parte*”); Comments of Education & Libraries Networks Coalition at 4-5 (noting that WAPs are “becoming increasingly crucial as” schools implement “Bring Your Own Device and 1:1 technology initiatives”); Comments of State E-rate Coordinators’ Alliance at 13 (noting that WAPs are essential broadband equipment); Comments of Funds for Learning, LLC at 18 (“Internal connections, such as routers or hubs, are essential to the effective use of broadband within schools and libraries.”); *Schools and Libraries Universal Service Support Mechanism; A National Broadband Plan for Our Future*, Notice of Proposed Rulemaking, 25 FCC Rcd 6872, ¶ 67 (2010).

<sup>15</sup> Public Notice ¶¶ 10, 40. As Chairman Wheeler explained, these are “low-hanging fruit . . . Narrowband pagers may have fit into a plan 18 years ago” but they do not have a role in today’s schools. Chairman Wheeler March 17<sup>th</sup> Remarks at 3.

security software, all of which are essential to the effective and secure distribution of bandwidth and data throughout the school building.<sup>16</sup>

**B. E-Rate Support Should be Used to Fund Tools that Improve Network Efficiency**

In addition to funding basic connectivity, the FCC should provide E-rate support for tools that improve the efficiency of schools' networks. For example, funding should be allocated to network management tools, such as caching and other network optimization techniques, that allow schools to maximize their available bandwidth.<sup>17</sup> These tools include local caching that can reduce the amount of traffic that is routed externally.<sup>18</sup> Caching can be accomplished using local proxy servers or standalone appliances that can cache content that is frequently accessed by students. To make the most efficient use of E-rate funds, the servers and/or other appliances used for caching, and the licenses and software associated with caching hardware, should be

---

<sup>16</sup> Comments of the School District of Philadelphia at 6 (supporting “the addition of Internet filtering and proxy equipment, and by extension, applicant-owned firewall and security equipment to the Eligible Services framework”); Reply Comments of Urban Libraries Council at 18 (“[T]he Commission should make . . . firewalls, intrusion detection/prevention and other network security technologies eligible for priority 1 funding – both as supported services and as products.”); Comments of EducationSuperHighway at 21 (“[T]he Commission should prioritize funding for broadband infrastructure (equipment & services), including . . . LAN and Wi-Fi infrastructure, and firewalls.”); Reply Comments of International Society for Technology in Education at 11 (“[W]ireless LAN controllers and wireless access points are becoming increasingly critical to ensuring that the increasing number of devices in schools can connect to high-speed internet access.”).

<sup>17</sup> See Comments of Amplify at 9-10; Comments of Comcast Corporation at 25 (“the E-rate program should provide support for caching services”); Comments of Funds for Learning, LLC at 43 (supporting funding for “network efficiency devices, such as caching servers and bandwidth management devices, or network security software”); Comments of Windstream Corporation at 3-4.

<sup>18</sup> See, e.g., Comments of Amplify at 9.

eligible for E-rate funding.<sup>19</sup> Similarly, to increase network efficiency and reduce bandwidth demand on WANs, E-rate should support WAN optimizers, such as Cisco’s WAAS, that reduce repetitious blocks of data.<sup>20</sup> WAN optimizers may be software-only or an integrated hardware/software appliance.<sup>21</sup> Funding optimization techniques will conserve E-rate funds by increasing the efficiency of supported networks, thereby reducing schools’ bandwidth demands.<sup>22</sup>

**C. The Commission Should Prioritize Funding Based on Schools’ Ability to Achieve Minimum Bandwidth Targets and Maximize the Value of the Support They Receive**

The Commission should base its funding decisions primarily on a school’s ability to meet minimum bandwidth requirements for effective digital learning.<sup>23</sup> As Amplify has explained,

---

<sup>19</sup> *Empowering America’s Students*, attached to Letter from Paula Boyd, Microsoft Corporation, to Marlene H. Dortch, FCC Secretary, at 8 (Feb. 24, 2014) (“The FCC should encourage efficient broadband usage practices by explicitly including caching in the [Eligible Services List].”) (“Microsoft *ex parte*”); Reply Comments of Chicago Public Schools, Chicago Public Library and City of Chicago at 4 (“Providing caching will allow for more efficient use of WAN links, which will result in reduced circuit costs.”); LAUSD *ex parte* at 1.

<sup>20</sup> WAN optimizers can reduce the load on WAN links by using advanced traffic categorization, prioritization, compression and pre-positioning of content. Exhibit A, *High-Speed Broadband in Every Classroom: The Promise of a Modernized E-rate Program*, attached to Comments of Cisco Systems, Inc. at 30 (recommending that schools use WAN optimizers to reduce bandwidth usage between schools inside the district).

<sup>21</sup> According to LAUSD, incorporating bandwidth optimizers into network routers can save \$3,000 – \$6,000 apiece compared to stand-alone bandwidth optimizers. LAUSD *ex parte* at 2.

<sup>22</sup> The LAUSD, for example “uses bandwidth optimizers to eliminate redundant data traffic as well as compress data before transmitting . . . [thereby] reduc[ing] network congestion and [the] recurring cost[s] of additional bandwidth.” LAUSD *ex parte* at 1; *see also* Microsoft *ex parte* at 6 (“Supporting the use of bandwidth-optimizing practices and technologies will reduce wasteful expenditures on greater bandwidth – stretching E-rate funds further, squeezing more usability out of every broadband dollar, and improving performance for schools.”).

<sup>23</sup> Public Notice ¶ 30.

schools need to be able to provide a minimum of 250 kbps/student if they are to take full advantage of available digital learning tools.<sup>24</sup> Those bandwidth requirements will likely grow over time, and the Commission should increase its minimum bandwidth targets as needed to ensure that schools have sufficient bandwidth.<sup>25</sup> As noted above, it is also important that any E-rate metrics focus on the bandwidth available to individual students, not simply the bandwidth delivered to the school building.<sup>26</sup>

Funding should be available to any school that falls below the 1 Mbps/student threshold the SETDA identified as a longer-term goal,<sup>27</sup> but priority should be given to schools below the

---

<sup>24</sup> Comments of Amplify at 7-8; Reply Comments of Amplify at 3-5. Indeed, schools may need far more than 250 kbps/student. Summit Public Schools, for example, noted that its network was “initially designed to deliver a consistent bandwidth stream equivalent to approximately 750 Kbps/student” but was re-designed to better accommodate “spikes” in traffic during particular times of day. Summit *ex parte* at 2; *see also, e.g.*, Reply Comments of EducationSuperHighway at 11 n.15 (Nov. 7, 2013) (supporting target threshold connectivity speeds that “include both external Internet connection speeds of . . . 1 Mbps per student or staff member by 2017”); *supra*, note 4.

<sup>25</sup> *See* Reply Comments of Amplify at 4; *id.* at attached Declaration of David A. Gestrich ¶¶ 5, 7; McGraw-Hill Education *ex parte* at 3-5 (“The broadband needed to support today’s state-of-the-art learning technologies will be insufficient for the next generation of technologies.”); Comments of EducationSuperHighway at 14 (“Bandwidth demands for education are escalating: deployment of devices will ‘dramatically accelerate’ the development of educational content and applicants, which in turn will drive the demand for broadband.”).

<sup>26</sup> *See* Comments of Amplify at 7; *see also* Reply Comments of Cox Communications, Inc. at 1 (“the real benefits of schools’ and libraries’ broadband connections are realized only if they provide a true end-to-end network to the students, teachers, and staff who use their classrooms and reading rooms”); Reply Comments of Education Coalition at 8 (“[H]igh-speed bandwidth to a school building only improves digital learning to the extent those facilities have the internal infrastructure capable of delivering that connectivity to classrooms, teachers, and students.”); Comments of National Cable & Telecommunications Association at 2 (“The goal of the Commission’s reforms should be improved broadband performance directly to students.”).

<sup>27</sup> *See Modernizing the E-rate Program for Schools and Libraries*, Notice of Proposed Rulemaking, 28 FCC Rcd 11304, ¶ 22 (2013).

250 kbps/student threshold Amplify has identified as the minimum necessary for effective digital education.<sup>28</sup> To encourage the efficient use of E-rate funds, the Commission should give a preference to schools that receive money from state “innovation funds” for devices, equipment, content and support for digital learning.<sup>29</sup> The marriage of these state funds and federal E-rate funds for broadband access and distribution would allow schools to maximize the benefits of both types of funding and expedite the transition to a digital curriculum. Giving priority to schools that receive complementary state funds would also create incentives for states to support aspects of digital learning initiatives, such as devices and training, not covered by E-rate.

---

<sup>28</sup> See, e.g., Reply Comments of America Cable Association at 5 (“the Commission should establish minimum requirements for broadband performance . . . and the program should not award funding where its aims are not being met”); Reply Comments of EducationSuperHighway at 11-12 (Nov. 7, 2013) (“E-rate applicants seeking funding for network upgrades [should] be required to demonstrate that their network infrastructure will (1) support current and near-term broadband needs by meeting threshold connectivity speeds; and (2) be able to cost-effectively scale to dramatically increased speeds in the future.”).

<sup>29</sup> See, e.g., Maryland State Department of Education, *Maryland Digital Learning Innovation Fund School Year 2013-2014*, at 2 (May 16, 2013), [http://www.marylandpublicschools.org/NR/rdonlyres/EBA86073-1D61-4095-9E11-2D3C43C01F42/35907/DigitalLearningInnovationFund\\_052013\\_.pdf](http://www.marylandpublicschools.org/NR/rdonlyres/EBA86073-1D61-4095-9E11-2D3C43C01F42/35907/DigitalLearningInnovationFund_052013_.pdf) (describing the Maryland Digital Learning Innovation Fund which is designed to fund personalized learning via digital platforms); Michigan Department of Education, Office of Education Improvement and Innovation Educational Technology and Data Coordination, *2013-14 Technology Readiness Infrastructure Grant: Statewide Activities Application General Instructions*, at 2 (Oct. 31, 2013), [http://www.techplan.org/downloads/pdfs/22i\\_statewide\\_activities\\_rfp\\_20131126\\_134654\\_1.pdf](http://www.techplan.org/downloads/pdfs/22i_statewide_activities_rfp_20131126_134654_1.pdf) (describing Michigan’s program to fund purchases of standardized personal learning and assessment devices). These programs help facilitate the transition to digital learning by developing digital curricula, funding training for teachers and students and paying for mobile devices for students to use. See, e.g., *O’Malley Announces \$5.5M in Education Grants: Funds to Help Boost Digital Learning, Increase Access to Higher Education*, WBALTV.com (Sept. 19, 2013), <http://www.wbaltv.com/education/omalley-announces-55m-in-education-grants/22000692> (describing grants from Maryland’s Digital Learning Innovation Fund).

Finally, the Commission should ensure that each school that receives E-rate support obtains sufficient funding to achieve the minimum target bandwidth established by the FCC (e.g., 250 kbps/student). It is a better use of E-rate resources to target funding to a smaller group of schools and ensure that they each receive enough support to obtain the connectivity they need than to spread funding among more schools but not give those schools enough money to achieve the bandwidth required to take advantage of digital learning curricula.<sup>30</sup> Merely facilitating Internet access is not enough. The Commission should ensure that schools have the broadband access they need to allow their students to use the digital learning tools that are becoming ever more critical to education in the twenty-first century.

---

<sup>30</sup> See Letter from John M. Beahn, Urban Libraries Council, to Marlene H. Dortch, FCC Secretary, at 2 (Apr. 2, 2014) (explaining that the “Commission should not fund half measures or incremental improvements that fall short of the defined end state”); see also, e.g., Prepared Remarks of Blair Levin, *Distributing The Future: Which Children Will We Leave Behind*, attached to Letter from Blair Levin, to Marlene H. Dortch, FCC Secretary, at 7-8 (Nov. 20, 2013) (explaining that a limited budget requires a method for prioritizing distribution and suggesting that funds should be used to ensure that schools receiving support achieve at least a “baseline” level of service).

### III. CONCLUSION

Amplify urges the Commission to take the steps outlined above in order to ensure that E-rate funds are used efficiently to maximize students' access to digital learning.

Respectfully submitted,

/s/ David Stevenson

David Stevenson  
Vice President, Government Relations  
AMPLIFY EDUCATION, INC.  
500 New Jersey Ave. NW, Floor 6  
Washington, DC 20001  
202-509-9516

Regina M. Keeney  
Gil M. Strobel  
LAWLER, METZGER, KEENEY & LOGAN, LLC  
2001 K Street NW, Suite 802  
Washington, DC 20006  
202-777-7700  
gstrobel@lawlermetzger.com

*Attorneys for Amplify Education, Inc.*

Antoinette Cook Bush  
Executive Vice President,  
Government Affairs  
NEWS CORPORATION  
300 New Jersey Ave. NW, Suite 900  
Washington, DC 20001  
202-465-8771

April 7, 2014

Comments of Amplify Education, Inc.  
April 7, 2014

**Certificate of Service**

I hereby certify that on this 7<sup>th</sup> day of April, 2014, I caused true and correct copies of the foregoing Comments of Amplify Education, Inc. to be mailed by electronic mail to:

Best Copy and Printing, Inc.  
445 12<sup>th</sup> Street, SW  
Room CY-B402  
Washington, DC 20554  
(800) 378-3160  
fcc@bcpiweb.com

Lisa Hone  
Telecommunications Access Policy Division  
Wireline Competition Bureau  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Room 6-A326  
Washington, DC 20554  
Lisa.Hone@fcc.gov

Charles Tyler  
Telecommunications Access Policy Division  
Wireline Competition Bureau  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Room 5-A452  
Washington, DC 20554  
Charles.Tyler@fcc.gov

/s/ Erica A. Carrales  
Erica A. Carrales